Idaho Petroleum Council

Education. Environment. Economy.

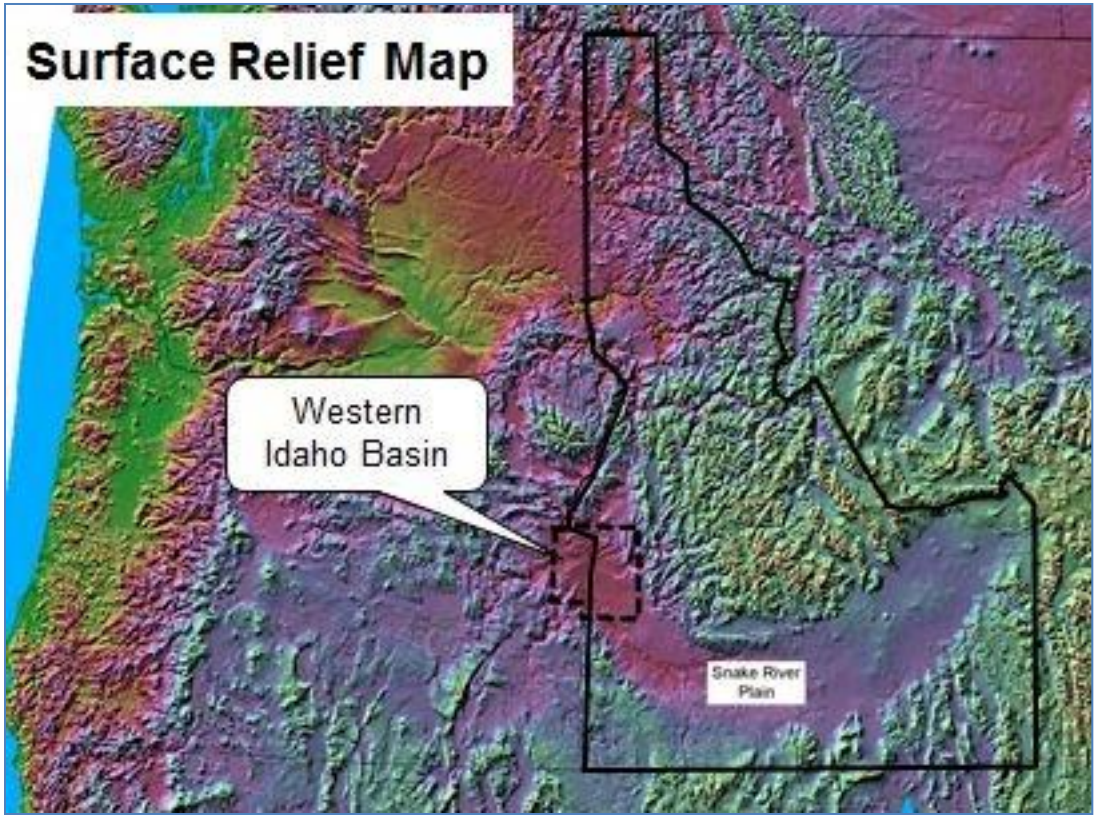
Idaho Petroleum Council

- Suzanne Budge, Executive Director
- Richard Brown, Weiser-Brown / Snake River Oil & Gas
- Kim Parsons, Exploration Manager – Bridge Resources
- John Peiserich, Perkins & Trotter, Adjunct Professor of Oil & Gas Bowen School of Law, University of Arkansas

Discussion Points

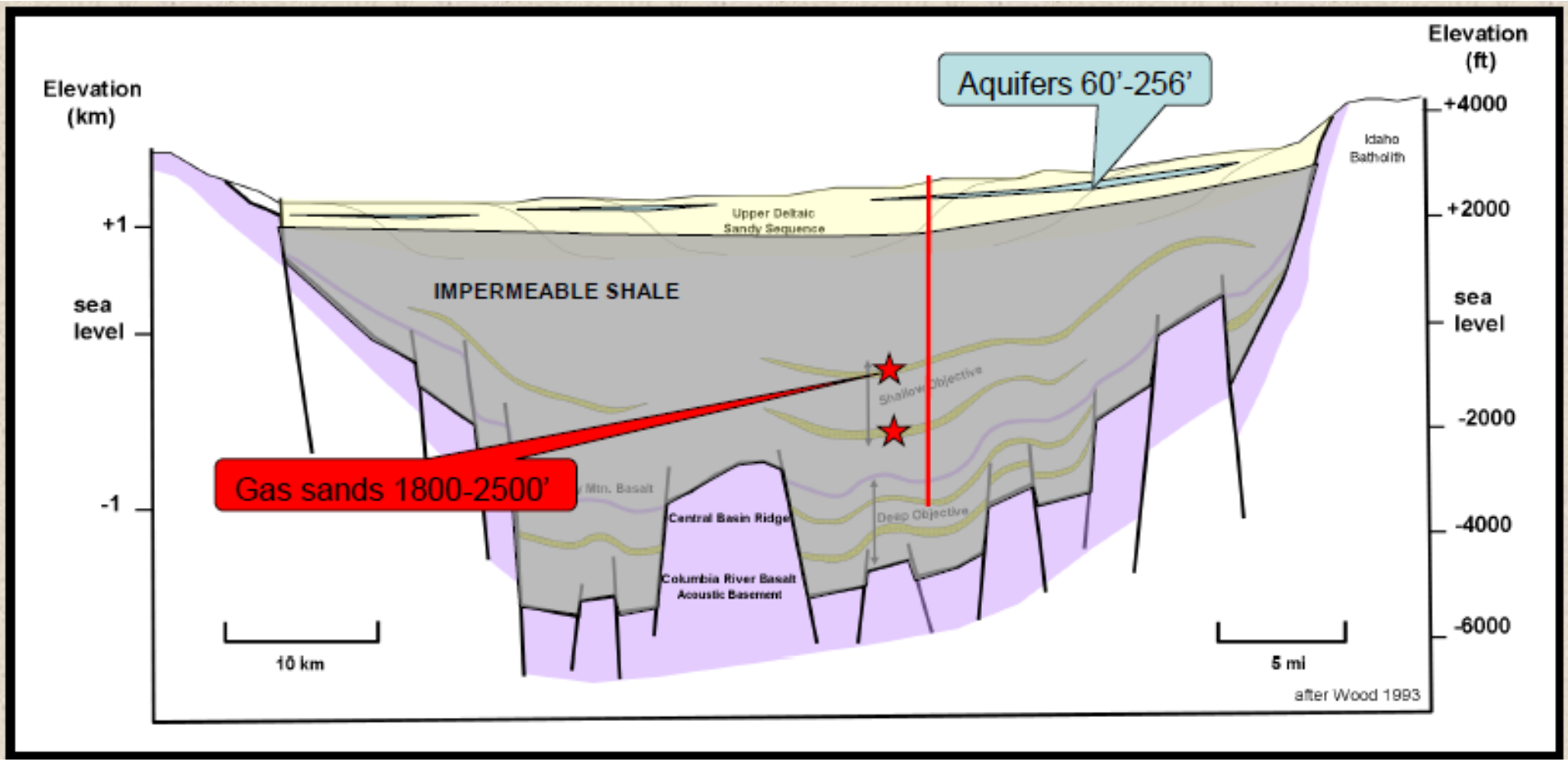
- The Geology – Why here?
- National Energy Policy / Usage
- Importance of Consistent Regulatory Framework
- Economics – What may be the benefits?
- Environmental Considerations
  - Water – How to Protect Idaho's Resource
    - Hydraulic Fracturing

Why we like Idaho

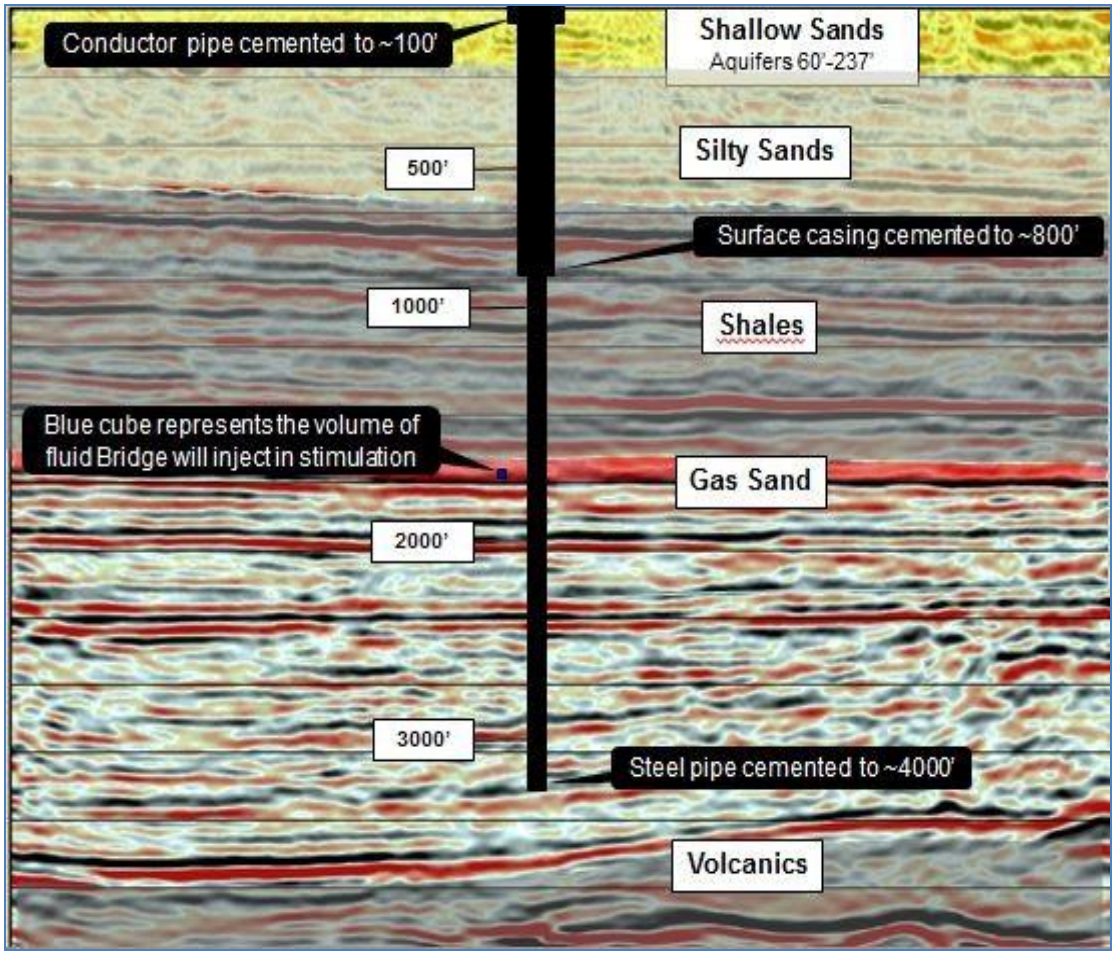


Idaho has real potential to be an important part of solving our nation's energy challenges.

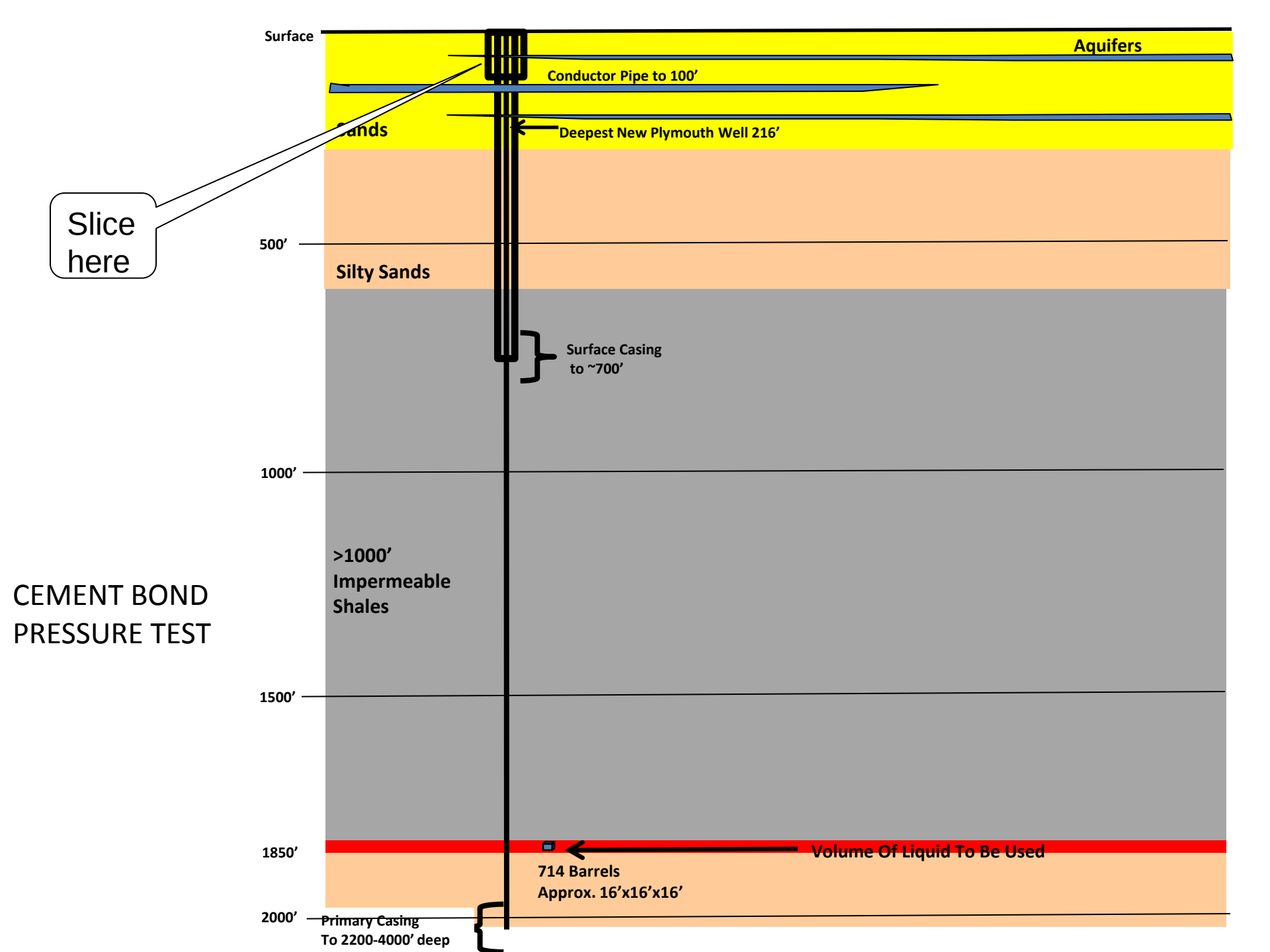
Impermeable Shales interlaid with Sand



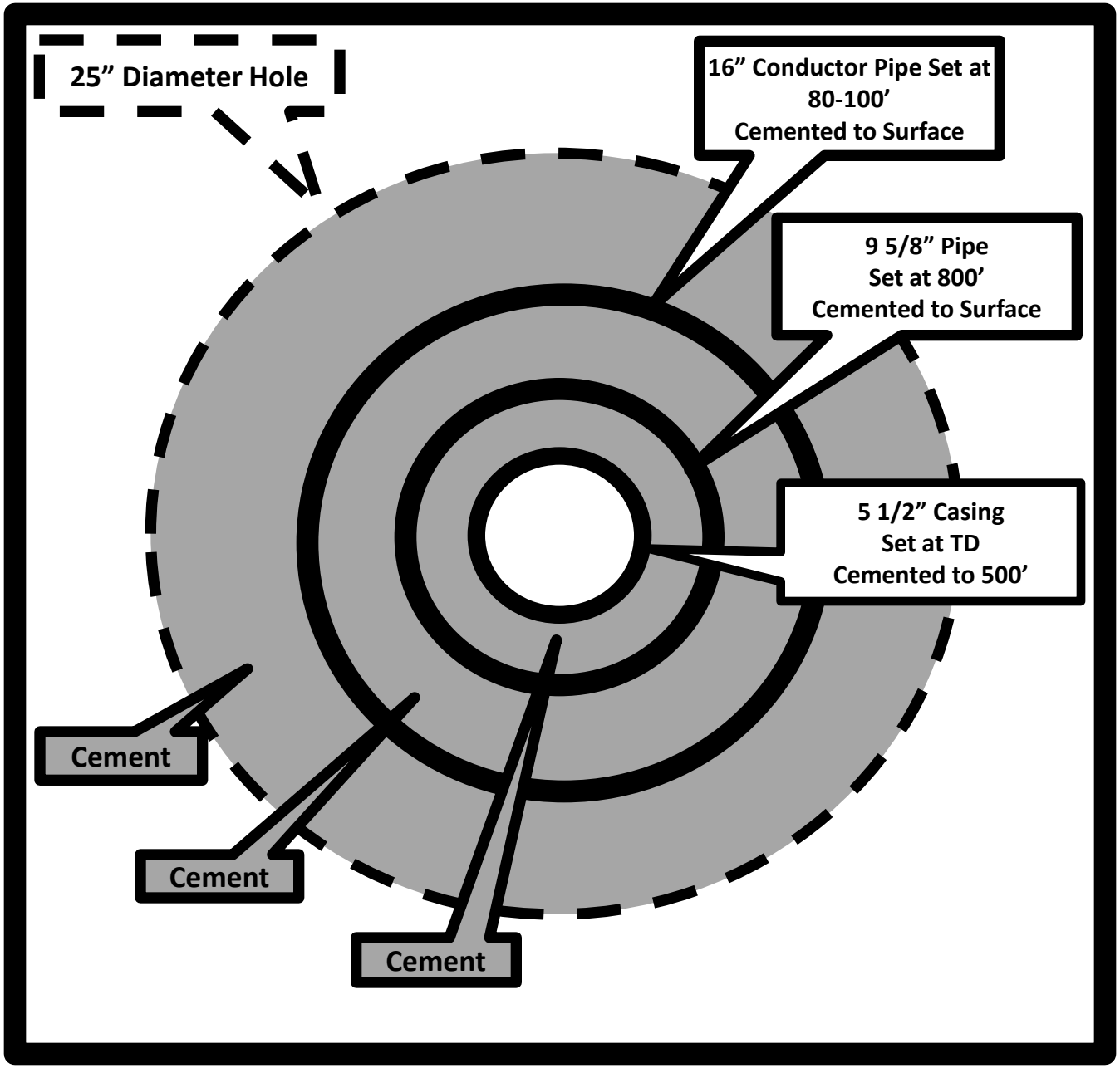
Our special geology



What we are finding in the Western Idaho basin is very exciting for our state.



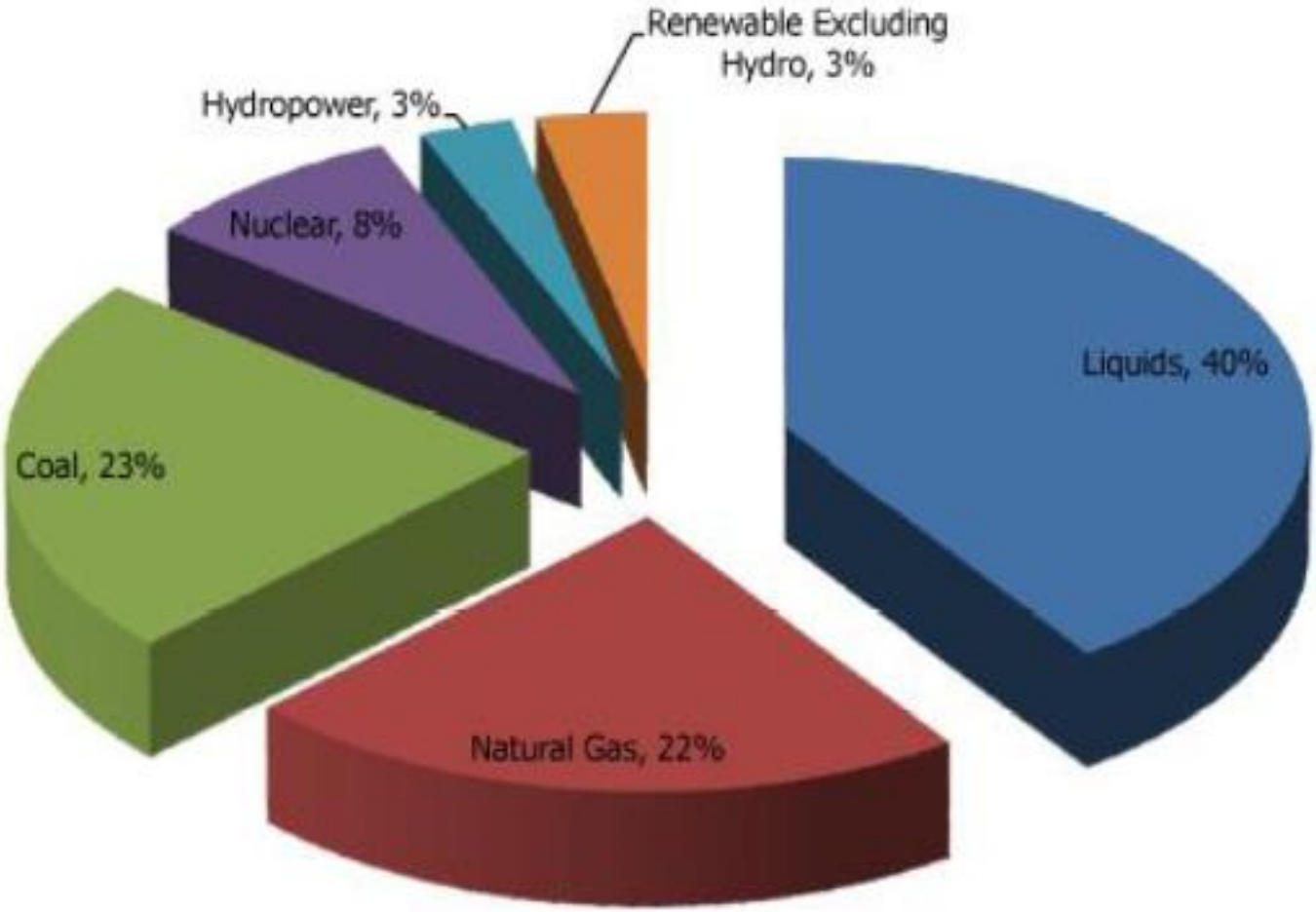
CEMENT BOND PRESSURE TEST


25” Diameter Hole
16” Conductor Pipe Set at
80-100’
Cemented to Surface
9 5/8” Pipe
Set at 800’
Cemented to Surface
5 1/2” Casing
Set at TD
Cemented to 500’
Cement
Cement
Cement

National Energy Policy

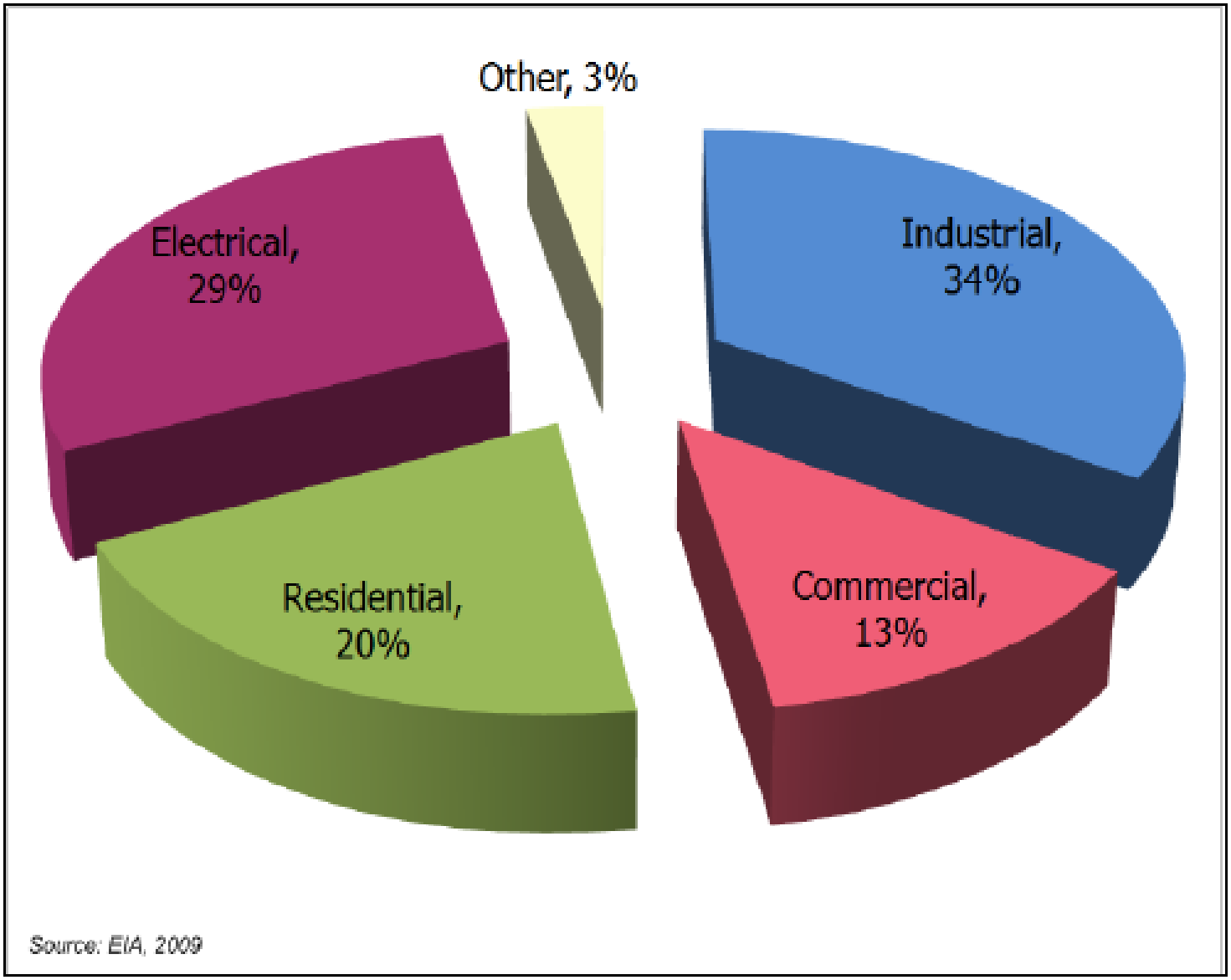
- Ultimate Goal is National Energy Independence
- Oil & Gas provides over 60% of current energy
- Oil & Gas provides opportunities for economic growth

EXHIBIT 1: UNITED STATES ENERGY CONSUMPTION BY FUEL (2007)



Source: EIA, 2008.

Exhibit 2: Natural Gas Use By Sector

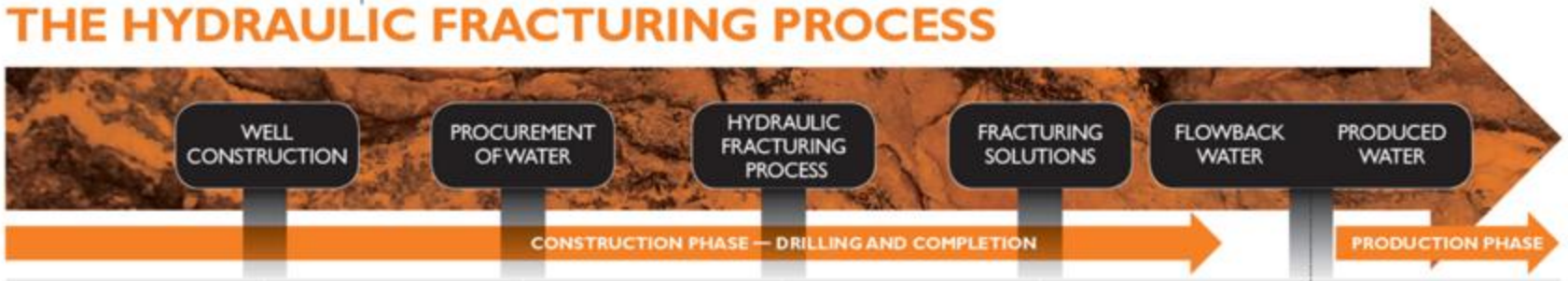


The Importance of a Consistent Regulatory Framework

- Existing Federal Regulatory Programs
- Idaho State Statute based on IOGCC Model Statutes
- Idaho negotiated rulemaking to improve existing Idaho Oil & Gas Commission Rules

- Why is a consistent framework important?
  - Ensures good compliance
  - Takes advantage of well understood programs administered nationally
  - Operators understand expectations

FEDERAL STATUTES REGULATE EVERY STEP OF THE HYDRAULIC FRACTURING PROCESS



CWA
- Water Resource Protection
- Inspection and Enforcement Authority

OSHA
- Worker Safety and Operations
- Inspection and Enforcement Authority

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OSHA
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OSHA
- Worker Safety and Operations
- Chemical Disclosure
- Inspection and Enforcement Authority

SUPERFUND
- Spill Reporting
- Clean Up
- Inspection and Enforcement Authority

EPRCA
- Hazardous Substance Reporting
- Inspection and Enforcement Authority

CWA
- Spill Prevention Control and Countermeasures
- Management Requirements
- Inspection and Enforcement Authority

CWA
- Water Resource Protection and Discharge Requirements
- Reporting
- Inspection and Enforcement Authority

SDWA
- Water Injection Requirements
- Inspection and Enforcement Authority

CWA: Clean Water Act • OSHA: Occupational Safety and Health Administration • SDWA: Safe Drinking Water Act • EPRCA: Community "Right to Know" Act

Existing Federal Rules

The Clean Water Act regulates surface water discharges and storm-water runoff.

The Clean Air Act sets rules for air emissions from engines, gas processing equipment and other sources associated with drilling and production activities.

The Safe Drinking Water Act regulates the disposal of fluid waste deep underground.

The National Environmental Policy Act requires permits and environmental impact assessments for drilling on federal lands.

The Occupational Safety and Health Act sets standards to help keep workers safe. These include requiring Material Safety Data Sheets be maintained and readily available onsite for chemicals used at that location.

The Emergency Planning & Community Right-to-Know Act requires storage of regulated chemicals in certain quantities to be reported annually to local and state emergency responders.

The National Pipeline Safety Act sets standards for pipeline construction, operation and maintenance administered by U.S. Department of Transportation.

Economic Opportunities

- An Arkansas Example
- What it means to Idaho
- How Idaho may be impacted

Arkansas Economics

- Direct Activities
  - Exploration
  - Extraction
  - Production
  - Transportation
  - Storage
  - Distribution
- Indirect Activities
  - Supply Chain Oriented
- Induced Economic Impacts
  - Personal Expenditures

Actual 2007 Impact

	2007 Direct Impact	2007 Indirect Impact	2007 Induced Impact	2007 Total Impact	2007 Multiplier
Output	$1,797,349,728	$416,673,682	$387,068,671	$2,601,092,069	1.45
Employment	3,776.4	1,904.6	3,852.0	9,533.0	2.52

Total Production 88.8 BCF
$651 Million Total Value

2007 Estimated State Taxes	Amount
Income Taxes from Employment	$5,023,891
Sales Taxes from Employment	$8,054,069
Income Taxes from Production	$34,216,210
Sales Taxes from Royalties	$3,359,130
Property Taxes for Schools from Production (2007 Assessment Year)	$3,703,650
Severance Taxes	$266,550
Arkansas State Taxes	**$54,623,500**

2007 Estimated Local Taxes	Amount
Sales Taxes from Employment	$4,698,207
Sales Taxes from Royalties	$2,339,776
Property Taxes from Production (2007 Assessment Year)	$1,303,067
Local Taxes	**$8,341,050**

Estimated Best Contingent Resources
Western Idaho Basin

35.6 BCF (40% of Arkansas Numbers)

PLUS

280 Thousand Barrels of Oil

- 35.6 Billion Cubic Feet (BCF)
  - $5.00 per MCF
  - $178,000,000 total value
- 280 Thousand Barrels of Oil Equivalent
  - $95.00 per barrel of oil
  - $26,600,000 total value

Tax Benefits to Idaho

- $206,600,000 total revenue
- Estimate 31.7% of $62,964,550
- $19,959,762 in combined state and local taxes

Other Financial Benefits

- Royalties paid to the State
- 12.5% royalty paid on total production for developed State lands
- In the Western Idaho Basin, approximately 25% of the mineral estate is owned by the State
- $206,600,000 x 0.125% x 0.25 =
- $6,456,250 paid in royalty to the State

An Idaho Example

- Bridge flowed one of its wells at 6 million cubic feet (MMCF) and 100 barrels (bbl) of condensate
- Economic Assumptions:
  - 20 wells
  - 5 MMCF/day gas and 100 bbl/day oil
  - $5.00/mcf gas and $95.00/bbl oil
  - Idaho Severance Tax = 2.05%
  - 25% State ownership of mineral estate
  - 12.5% State Royalty

Severance Taxes

- Severance Taxes to State
  - Gas Severance
    - $10,250 per day
    - $3, 741,250 per year
  - Oil Severance
    - $3,895 per day
    - $1,421,675 per year
- Total Severance Tax
  - $5,162,925 in one year

Idaho State Royalties

- 100 million cubic feet (MMCF) per day production gas
- 2000 barrels (bbl) per day production oil
- 12.5% State Royalty
- 25% State Mineral Interest Ownership in Western Idaho Basin
- $15,625 per day gas
- $5,937 per day oil
- **$5,700,000 per year to Idaho**

Economic Benefits to Idaho

- **$5,162,925 per year – Severance Tax**
- **$5,700,000 per year – Royalty to Idaho**

- **PLUS**
- **Income Tax on Royalty to Private Landowners**
- **Sales Taxes**
- **Property Taxes**
- **Employment Taxes**

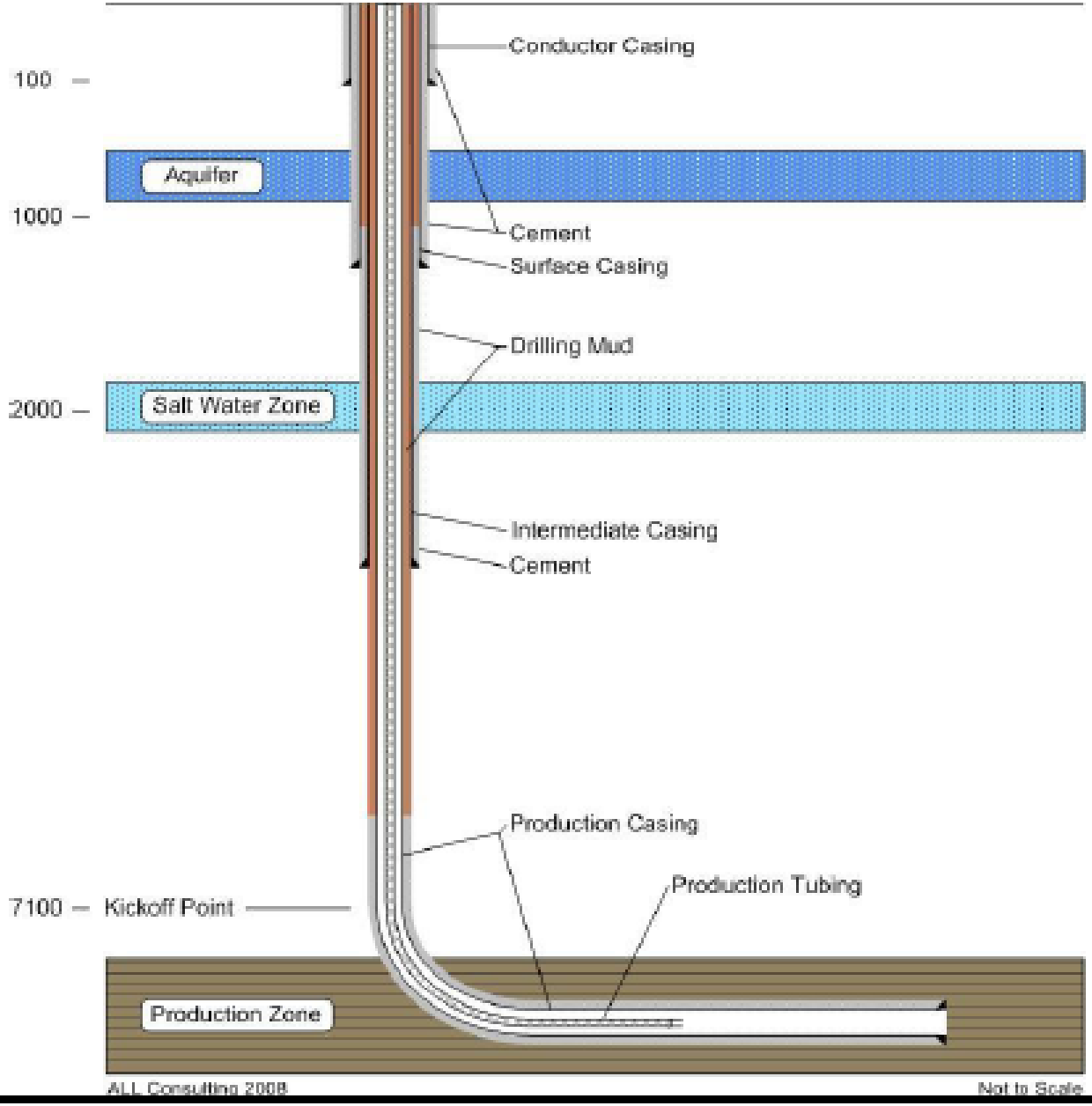
The Last and Most Important Issue
The Environment

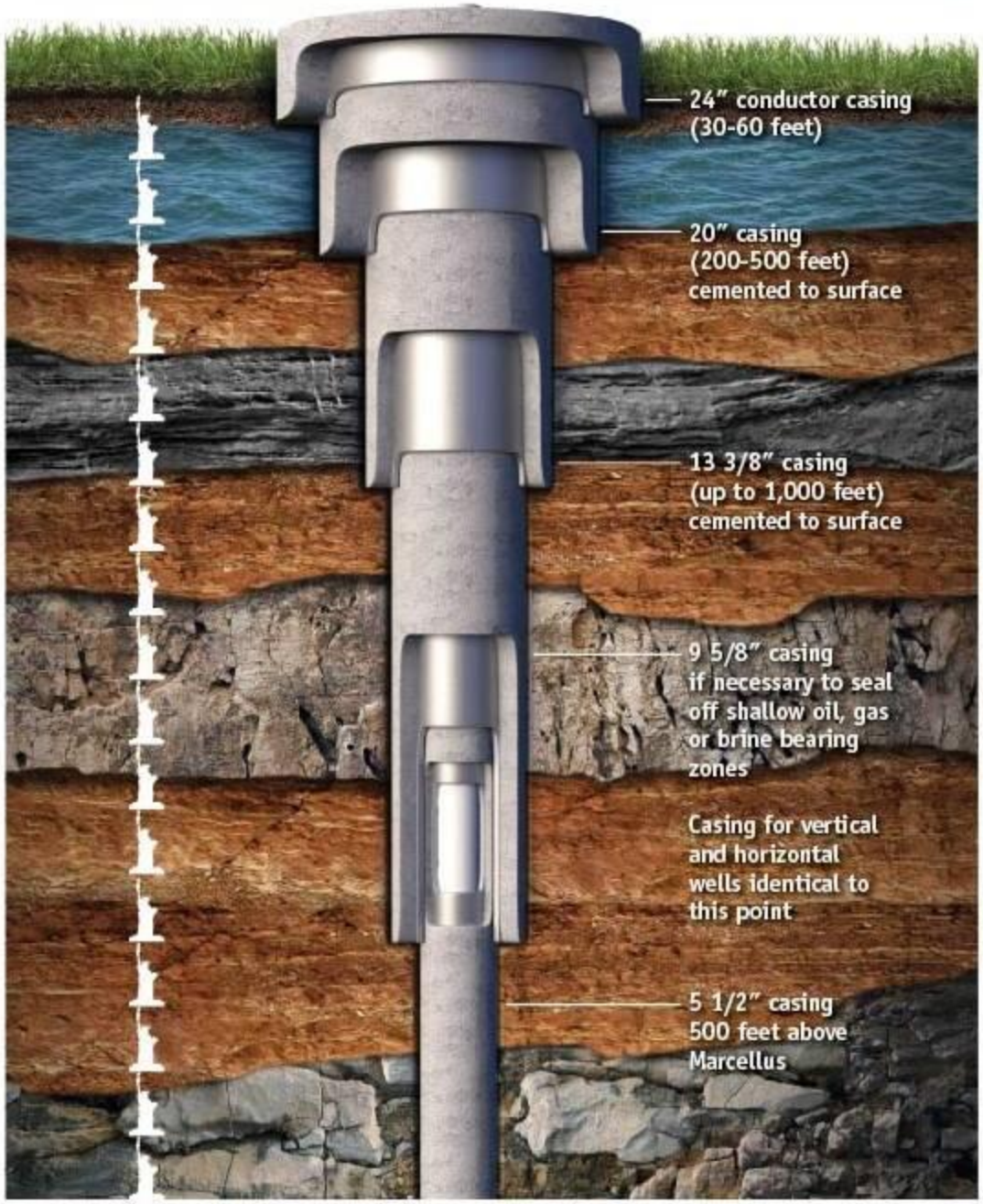
Water – Idaho's Scarce Resource

- Existing Physical Mechanisms for Protection
  - Well Casing Program
  - Cement Bond Log
  - Mechanical Integrity Testing
  - Annulus Pressure Monitoring

- Existing Regulatory Programs
  - Federal Rules and Regulations
  - State Rules and Regulations – Currently Updating

EXHIBIT 30: CASING ZONES AND CEMENT PROGRAMS





www.marcelluscoalition.org

Courtesy of Range Resources

Hydraulic Fracturing

- **Nine out of 10 natural gas wells in America currently utilize the technique, resulting in more than 600 trillion cubic feet of gas being brought to market.**
- **Not a single confirmed case of drinking water contamination has ever been attributed to hydraulic fracturing.**
- **Over 1,000,000 wells have been “fracked” over the last 50+ years with ever improving technology.**

EPA Administrator Jackson's Congressional Testimony on May 25, 2011

- Jackson said natural gas creates less air pollution than other fossil fuels "so increasing America's natural gas production is a good thing."

- She said Congress told the EPA to study the relationship between fracking and drinking water. "We are doing that, with input from technical experts, the public and industry," she said.

- **"In the meantime, EPA will step in to protect local residents if a driller jeopardizes clean water and the state government does not act."**

- Under questioning from a Pennsylvania Republican, **Jackson said she was "not aware of any proven case where the fracking process itself" had affected water**.

New York's Recent Decision

- *"We've deliberated, we've considered the comments, we have looked at what's gone on in other states…And at the end of this stage of the deliberations, we've concluded that high-volume hydrofracking can be undertaken safely, along with strong and aggressive regulations."* – New York DEC Commissioner, Joe Martens
- "A supporting study for this dSGEIS concludes that it is highly unlikely that groundwater contamination would occur by fluids pumped into a wellbore for hydraulic fracturing. (Executive Summary, p. 11)
- "Hydraulic fracturing occurs after the well is cased and cemented to protect fresh water zones and isolate the target hydrocarbon-bearing zone, and after the drilling rig and its associated equipment have been removed." (Chapter 5, p. 5-88)

Gasland Myths

WRONG ON THE LAW

GasLand myth:
"What I didn't know was that the 2005 energy bill pushed through Congress by Dick Cheney exempts the oil and natural gas industries from the Clean Water Act, the Clean Air Act, the Safe Drinking Water Act...and about a dozen other environmental regulations." (6:05)

Actual truth:

- ✓ The oil and natural gas industry is regulated **under every single one of these federal laws** — under provisions of each that are relevant to its operations.
- ✓ The 2005 energy bill was supported by nearly three-quarters of the U.S. Senate, including then-Sen. Barack Obama of Illinois. In the U.S. House, 75 Democrats joined 200 Republicans in supporting the final bill.

WRONG ON THE PROCESS

GasLand myth:
"The fracking itself is like a mini-earthquake. ... In order to frack, you need some fracking fluid — a mix of over 596 chemicals." (6:50)

Actual truth:

- ✓ The fracturing process uses a mixture of fluids comprised almost entirely (99.5%) of water and sand. The remaining materials, used to help deliver the water down the wellbore, are typically found and used around the house. The average fracturing operation utilizes fewer than 12 of these components, according to the Ground Water Protection Council — not 596.
- ✓ Over the course of its history, fracturing has not only been used to increase the flow of oil and natural gas from existing wells, but also to access things like water and geothermal energy. It's even been used by EPA to clean up Superfund sites.

More Myths

WRONG ON DISCLOSURE

GasLand myth:
"Fracking chemicals are considered proprietary." (1:00:56)

Actual truth:

- ✓ The **entire universe of additives used in the fracturing process** is known to the public and the state agencies that represent them.
- ✓ Not only do individual states mandate disclosure, the federal government does as well. The Occupational Safety and Health Administration (OSHA) mandates this information be kept at every wellsite, and made readily available to response and medical personnel in case of an emergency.

WRONG ON FLAMMABLE FAUCETS

GasLand myth:
Methane in the water in Fort Lupton, Colo. said to be the result of natural gas development.

Actual truth:

- ✓ Colorado debunks the claim: "Dissolved methane in well water **appears to be biogenic [naturally occurring] in origin**. ...There are no indications of oil & gas related impacts to water well." (COGCC, 9/30/08)

And more …

WRONG ON DUNKARD CREEK

GasLand myth:
Deceased fish along a 35-mile stretch of creek in western Pennsylvania attributed to natural gas development.

Actual truth:

- ✓ EPA debunks the claim: "The situation in Dunkard Creek **should be considered a chronic exposure** since chloride levels were elevated above the criteria for long periods of time." (EPA, 11/23/09)
- ✓ Local media cite "glaring error": "One glaring error in the film is the suggestion that gas drilling led to the September fish kill at Dunkard Creek in Greene County. That was determined to have been caused by a golden algae bloom from mine drainage from a [mine] discharge." (*Washington [Pa.] Observer-Reporter*, 6/5/10)

WRONG ON WEST DIVIDE CREEK

GasLand myth:
Methane in West Divide Creek, Colo. blamed on natural gas development.

Actual truth:

- ✓ Colorado debunks it (again): "Stable isotopes from 2007 consistent with 2004 samples indicating gas bubbling in surface water features is of **biogenic origin**." (COGCC, July 2009)
- ✓ Follow-up email: "Lisa: As you know since 2004, the COGCC staff has responded to your concerns about potential gas seepage along West Divide Creek on your property and to date **we have not found any indication that the seepage you have observed is related to oil and gas activity.**" (email from COGCC to Bracken, 06/30/08)

http://youtu.be/k3n7sPYytQY

http://youtu.be/U2ms95HX0l4